

In the Claims

1-16. (Canceled)

17. (Previously Presented) In a television network environment consisting of a display device and a storage medium, a method for delivering advertisements to subscribers in advance of presentation of the advertisements to the subscribers, the method comprising:

transmitting advertisements within an advertisement channel to subscribers in advance of presentation of the advertisements to the subscribers, wherein the advertisements are transmitted at a bit rate that is less than the bit rate required to present the advertisements in real time; and storing the advertisements in a storage medium.

18. (Previously Presented) The method of claim 17, further comprising selecting targeted advertisements to be transmitted to the subscribers, wherein said transmitting includes transmitting the targeted advertisements.

19. (Previously Presented) The method of claim 18, wherein the targeted advertisements are selected for the subscribers based on subscriber characteristics.

20. (Previously Presented) The method of claim 19, wherein the subscriber characteristics include at least some subset of demographic attributes, geographic attributes, psychological attributes, and viewing attributes.

21. (Previously Presented) The method of claim 17, further comprising forming subgroups of subscribers that share one or more common subscriber characteristics, wherein said transmitting includes transmitting the advertisements to the subgroups.

22. (Previously Presented) The method of claim 21, further comprising selecting targeted advertisements for the subgroups, wherein said transmitting includes transmitting the targeted advertisements to the subgroups.

23. (Previously Presented) The method of claim 17, wherein said transmitting includes transmitting the advertisements within the advertisement channel at a constant bit rate.

24. (Previously Presented) The method of claim 17, wherein said transmitting includes transmitting the advertisements within the advertisement channel at a variable bit rate that changes over time according to bandwidth available for the advertisement channel.

25. (Previously Presented) The method of claim 24, wherein the bandwidth available for the advertisement channel is based on bandwidth used and total bandwidth of the television network.

26. (Previously Presented) The method of claim 25, wherein the bandwidth used includes bandwidth used for transmitting programming channels.

27. (Previously Presented) A system for delivering advertisements to subscribers in advance of presentation of the advertisements to the subscribers, the system comprising:

a transmitter for transmitting the advertisements to the subscribers within an advertisement channel in advance of presentation of the advertisements to the subscribers, wherein the advertisements are transmitted at a bit rate that is less than the bit rate required to present the advertisements in real time;

a storage medium for storing the advertisements; and

a display device interface for allowing the advertisements to be presented to the subscriber.

28. (Previously Presented) The system of claim 27, further comprising an advertisement selector for selecting targeted advertisements to be transmitted to the subscribers.

29. (Previously Presented) The system of claim 28, further comprising a subgroup creator for forming a subgroup of subscribers having at least one subscriber characteristic in common, wherein said transmitter transmits the targeted advertisements to the subgroups.

30. (Previously Presented) The system of claim 27, wherein said transmitter transmits the advertisements within the advertisement channel at a constant bit rate.

31. (Previously Presented) The system of claim 27, wherein said transmitter is capable of monitoring available bandwidth for the advertisement channel and statistically varying the bit rate that the advertisements are transmitted at based on the available bandwidth.

32. (Previously Presented) In a television network environment consisting of a display device and a storage medium, a method for delivering advertisements to subscribers in advance of presentation of the advertisements to the subscribers, the method comprising:

forming a subgroup of subscribers that share one or more common subscriber characteristics;

selecting targeted advertisements to be transmitted to the subgroup;

transmitting the targeted advertisements to the subgroup within an advertisement channel in advance of presentation of the advertisements to the subscribers, wherein the targeted advertisements are transmitted at a bit rate that is less than the bit rate required to present the targeted advertisements in real time; and

storing the targeted advertisements in a storage medium.

33. (Canceled)

34. (Previously Presented) The method of claim 32, wherein said transmitting includes transmitting the targeted advertisements within the advertisement channel at a variable bit rate, wherein the bite rate changes over time according to bandwidth available for the advertisement channel.

35. (Previously Presented) The method of claim 32, wherein said transmitting includes transmitting the advertisements off-peak.

36. (Previously Presented) The method of claim 32, wherein said selecting includes selecting the targeted advertisements based on subscriber characteristics that include at least some subset of demographic attributes, geographic attributes, psychological attributes, and viewing attributes.

37. (Currently Amended) A method for receiving advertisements for storage, the method comprising:

receiving an ad channel containing advertisements over same medium as content is received, wherein the advertisements are transmitted over the medium at a low bit rate; and
storing the advertisements in a storage medium.

38. (Currently Amended) The method of claim 37, further comprising
retrieving the advertisements from the storage medium; and
presenting the advertisements to the subscribers.

39. (Currently Amended) The method of claim 37, wherein
the medium has a predefined bandwidth;

the content delivered over the medium utilizes at least a portion of the predefined bandwidth of the medium, wherein bandwidth utilized is based at least in part on bit rate that the content is transmitted at; and

the advertisements within the ad channel are transmitted within remaining bandwidth.

40. (Previously Presented) The method of claim 37, wherein the low bit rate is less than a bit rate required to present the advertisements in real time.

41. (Previously Presented) The method of claim 37, wherein the low bit rate is less than a bit rate required to present the advertisement with an acceptable viewing quality.

42. (Previously Presented) The method of claim 37, wherein the low bit rate is a variable bit rate.

43. (Previously Presented) The method of claim 37, wherein the low bit rate is a bursty bit rate.

44. (Previously Presented) The method of claim 37, wherein the low bit rate utilizes leftover bandwidth in the medium.

45. (Currently Amended) The method of claim 37, wherein said receiving ~~advertisements~~ includes receiving the ad channel ~~advertisements~~ in a discontinuous fashion.

46. (Previously Presented) The method of claim 37, wherein an advertisement may be received over a plurality of discontinuous streams.

47. (Currently Amended) A method for transmitting advertisements to subscribers for storage, the method comprising:

transmitting at least one content stream to a subscriber over a medium;

determining bandwidth available after said transmitting at least one content stream;

transmitting an ad channel containing advertisements to the subscriber over the medium,

wherein the advertisements are transmitted at a low bit rate that is based on said determining, and wherein the advertisements are stored for possible later presentation to the subscribers.

48. (Previously Presented) The method of claim 47, wherein the low bit rate is less than a bit rate required to present the advertisements in real time.

49. (Previously Presented) The method of claim 47, wherein the low bit rate is less than a bit rate required to present the advertisement with an acceptable viewing quality.

50. (Previously Presented) The method of claim 47, wherein the low bit rate is a variable bit rate.

51. (Previously Presented) The method of claim 47, wherein the low bit rate is a bursty bit rate.

52. (Currently Amended) The method of claim 47, wherein said transmitting advertisements includes transmitting the ad channel advertisements in a discontinuous fashion.

53. (Previously Presented) The method of claim 47, wherein an advertisement may be transmitted over a plurality of discontinuous streams.

54. (Currently Amended) In a content delivery network including a content supply, an advertisement supply, a delivery network, a content presentation device and a storage medium, a method for delivering advertisements to subscribers in advance of presentation of the advertisements to the subscribers, the method comprising:

transmitting content to subscribers over a delivery network;

determining remaining bandwidth available in the delivery network after said transmitting content;

transmitting an ad channel containing advertisements to the subscribers within the remaining bandwidth available in the delivery network, wherein the advertisements are transmitted at a low bit rate; and

storing the advertisements in the storage medium for possible later presentation to the subscribers.

55. (Previously Presented) The method of claim 54, wherein the low bit rate does not provide for real time presentation of the advertisements.

56. (Previously Presented) The method of claim 54, wherein the low bit rate is a variable bit rate.

57. (Previously Presented) The method of claim 54, wherein the low bit rate is a bursty bit rate.

58. (Currently Amended) The method of claim 54, wherein said transmitting an ad channel advertisements includes transmitting an ad channel ~~an advertisement~~ over a plurality of discontinuous streams.

59. (Currently Amended) The method of claim 54, wherein said transmitting content includes transmitting content within channels; determining includes determining remaining bandwidth within at least one channel after said transmitting content; and

said transmitting an ad channel advertisements includes transmitting an ad channel advertisements to the subscribers within the remaining bandwidth available in the at least one channel.

60. (Previously Presented) The method of claim 59, wherein said transmitting content includes transmitting multiple program streams within at least one channel; and

determining includes determining remaining bandwidth within the at least one channel after said transmitting multiple program streams.

61. (Previously Presented) The method of claim 54, wherein said transmitting content includes statistically multiplexing a plurality of digital program streams; and

determining includes determining remaining bandwidth after transmitting the statistically multiplexed digital program streams.

62. (Previously Presented) The method of claim 61, wherein said statistically multiplexing includes statistically multiplexing the plurality of digital program streams in at least one channel; and

determining includes determining remaining bandwidth with the at least one channel after transmitting the statistically multiplexed digital program streams.

63. (New) A method for receiving advertisements within an ad channel and storing the advertisements for possible later presentation, the method comprising:

receiving an ad channel and at least one content channel over a medium, wherein the medium has a predefined bandwidth, the at least one content channel utilizes at least a portion of the predefined bandwidth of the medium based at least in part on bit rate of content, wherein the ad channel utilizes bandwidth remaining after the at least one content channel, the remaining bandwidth supporting a bit rate less than bit rate necessary for real time display of advertisements within the ad channel; and

storing the advertisements received from the ad channel in a storage medium.

64. (New) The method of claim 63, wherein the medium is a carrier channel.

65. (New) The method of claim 63, wherein said receiving includes receiving the ad channel and the least one content channel within a statistically multiplexed stream.

66. (New) A method for transmitting advertisements in an ad channel for possible later presentation, the method comprising:

selecting content to be transmitted over a medium within at least one content channel;

determining bandwidth required to transmit the content within the at least one content channel at a bit rate sufficient for real time presentation;

determining remaining bandwidth for the medium;

generating a transmission channel including the at least one content channel and an ad channel, wherein the ad channel utilizes the remaining bandwidth; and

transmitting the transmission channel, wherein the remaining bandwidth supports a bit rate less than bit rate necessary for real time display of advertisements within the ad channel.

67. (New) The method of claim 66, wherein the medium is a carrier channel.

68. (New) The method of claim 66, wherein said generating includes generating a statistically multiplexed stream.

69. (New) A method for receiving advertisements within an ad channel and storing the advertisements for possible later presentation, the method comprising:

generating a statistically multiplexed stream having an ad channel and at least one content channel, wherein the statistically multiplexed stream has a predefined bandwidth, the at least one content channel utilizes at least a portion of the predefined bandwidth based at least in part on bit rate of content, wherein the ad channel utilizes bandwidth remaining after the at least one content channel; and

transmitting the statistically multiplexed stream, the remaining bandwidth supporting a bit rate less than bit rate necessary for real time display of advertisements within the ad channel.